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**REMARKS**

1. The Examiner has rejected claims 1-10, 12, 13, 24 and 25 as lacking novelty in light of Joyce (US Patent 4,814,553).

2. In response, the Applicant has sought to amend the claims on file to more clearly distinguish the claimed invention from the invention disclosed in Joyce. The Applicant submits that the claimed invention differs from Joyce for the following reasons:

Amended claim 1 defines the "*orientation data*" as "*being indicative of at least one of a pitch and a roll of the housing relative to the surface.*" It is clear that the mouse/tablet arrangement disclosed in Joyce is primarily directed at locating the position of a mouse on a tablet. Nevertheless, the Examiner correctly points out that the mouse position data in Joyce "*may include the angular orientation of the mouse as well as its position with respect to the surface*" (col. 2, lines 57-59). The Examiner further correctly points out in paragraph 6 of the Detailed Action (in relation to old claim 2) that "*Joyce teaches that the orientation data is indicative of the x-y plane.*" Referring to Figure 61 of the present specification, it is fair to say that the orientation data detected by the Joyce system is the yaw of the mouse relative to the tablet surface.

Although Joyce discloses a means for detecting the yaw of the mouse, it does not disclose a means for detecting the pitch or roll of the mouse. In fact, given the planar nature of the under-surface of the mouse and the way that it rolls along the tablet surface, the Joyce mouse does not pitch or roll in use. It is therefore not possible to obtain "*orientation data*" that is "*indicative of at least one of a pitch and a roll of the housing relative to the surface*" in the Joyce arrangement.

For these reasons the Applicant submits that amended claim 1 is novel in light of Joyce.

3. Since amended claim 1 is both novel and inventive, the Applicant further submits that subsidiary claims 2 to 28 are also novel and inventive in light of the cited prior art.

4. The Applicant has not specifically addressed the Examiner's obviousness objections directed at a number of the subsidiary claims since the features of amended claim 1 are not found in any of the citations, either individually or collectively.

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5. Despite the differences between Joyce and the claimed invention, the Applicant has sought to amend the claims to even more clearly distinguish the claimed invention from the cited art. Claim 1 has been amended to specify that the orientation sensor, configured to generate the orientation data using at least some of the coded data, is contained within the housing.

Joyce does not disclose a sensing device with an in-built orientation sensor which generates orientation data using the sensed coded data. In Joyce, any analysis of the pen position or orientation is done by a computer system external to the sensing device. The sensing device merely captures the raw data and sends it via a cable to the computer system.

In Joyce, column 2, lines 55 to 57 read "*A microprocessor or similar computing device is preferably utilized to convert these output signals into meaningful mouse position data*" and column 5, lines 40 to 42 read "*Mouse position computation begins by processor 40 reading the digitised array pixels values from the A/D convertor into memory 42.*" The Joyce mouse is not "*configured to generate the orientation data using at least some of the coded data*" as claimed in claim 1.

6. In order to further distinguish the claimed invention from Joyce, the Applicant has sought to introduce new claims 29 and 30. Claim 29 is very similar to amended claim 1, except that the orientation data is defined as "*being indicative of at least two dimensions of an orientation of the sensing device relative to the surface*" (emphasis added). The Applicant submits that this at least two-dimensional orientation data is fairly based upon the specification as filed. It is clear, for example, from Figure 61 that three dimensions of the orientation of the pen are being described.

In order to establish a three-dimensional orientation, three variables must be known. A number of different standards exist for such variables. The Applicant has used pitch, roll and yaw for convenience, but one of ordinary skill in the art would understand that these three orientation variables could trivially be converted to another set of variables, such as azimuth, altitude and twist.

It is clear that Joyce does not disclose any system for determining either two-dimensional or three-dimensional orientation. This citation only assesses orientation in the plane of the tablet surface. This orientation is most similar to yaw or azimuth (depending upon which set of variables you choose to apply).

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Joyce therefore does not disclose a sensing device having an "*orientation sensor configured to generate the orientation data using at least some of the coded data*" in which the orientation data is "*indicative of at least two dimensions of an orientation of the sensing device relative to the surface*" as claimed in claim 29.

The Applicant submits that new claims 29 and 30 are both novel and inventive in light of the citations.

7. In paragraphs 2 and 4 of the Detailed Action the Examiner has objected to the clarity of a number of terms used in the claims. The Applicant submits that these terms would be readily understood by one of ordinary skill in the art.

8. Claim 22 has been amended in order to avoid multiple dependencies. Claims 12 and 13 have been cancelled and a number of other minor amendments have been made to the remaining claims in order to improve their clarity.

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**CONCLUSION**

It is respectfully submitted that all of the Examiner's objections have been successfully traversed. Accordingly, it is submitted that the application is now in condition for allowance. Reconsideration and allowance of the application is courteously solicited.

Very respectfully,

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